

COALITION FOR
SMARTER GROWTH

Celebrating 10 Years of Smart Growth!

Presents:

**"Less Traffic, Better Places:
Reforming Parking
Requirements"**

By Jason Schrieber

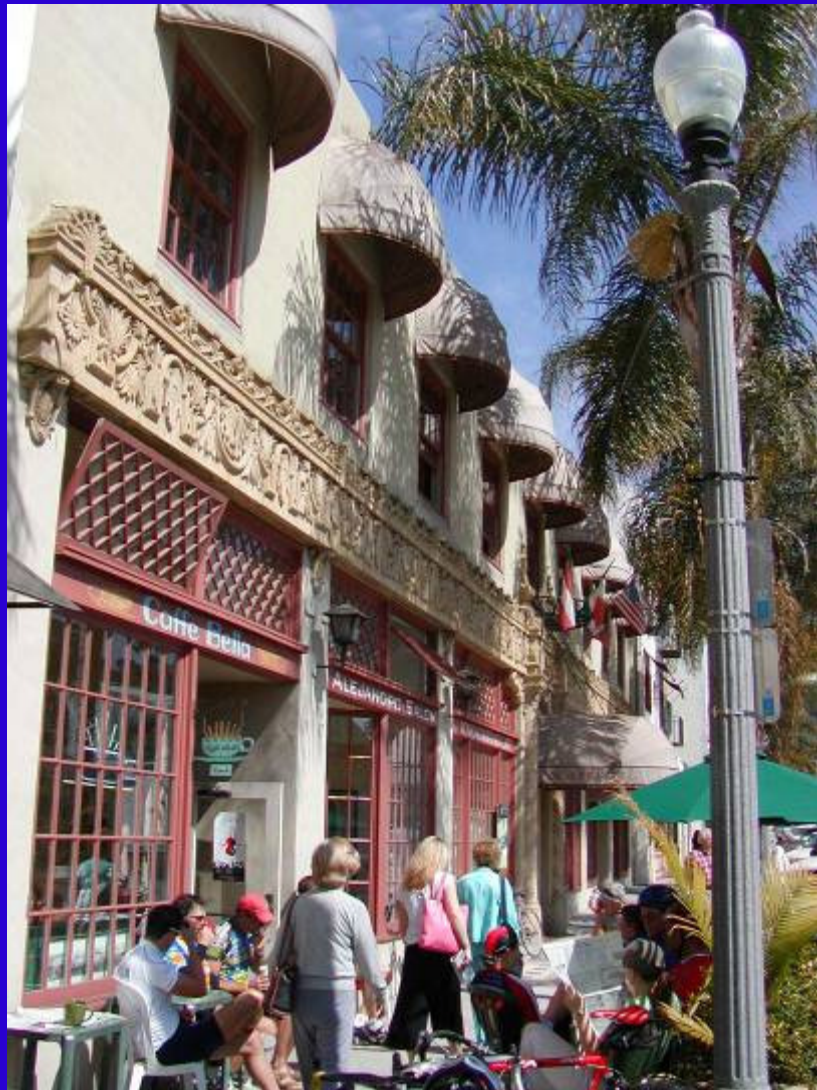
Nelson | Nygaard
consulting associates











Idea 1

Determine the real cost of
building parking



Stanford University's Year 2010 Transportation Strategy

***A typical
campus &
downtown
planning
challenge***

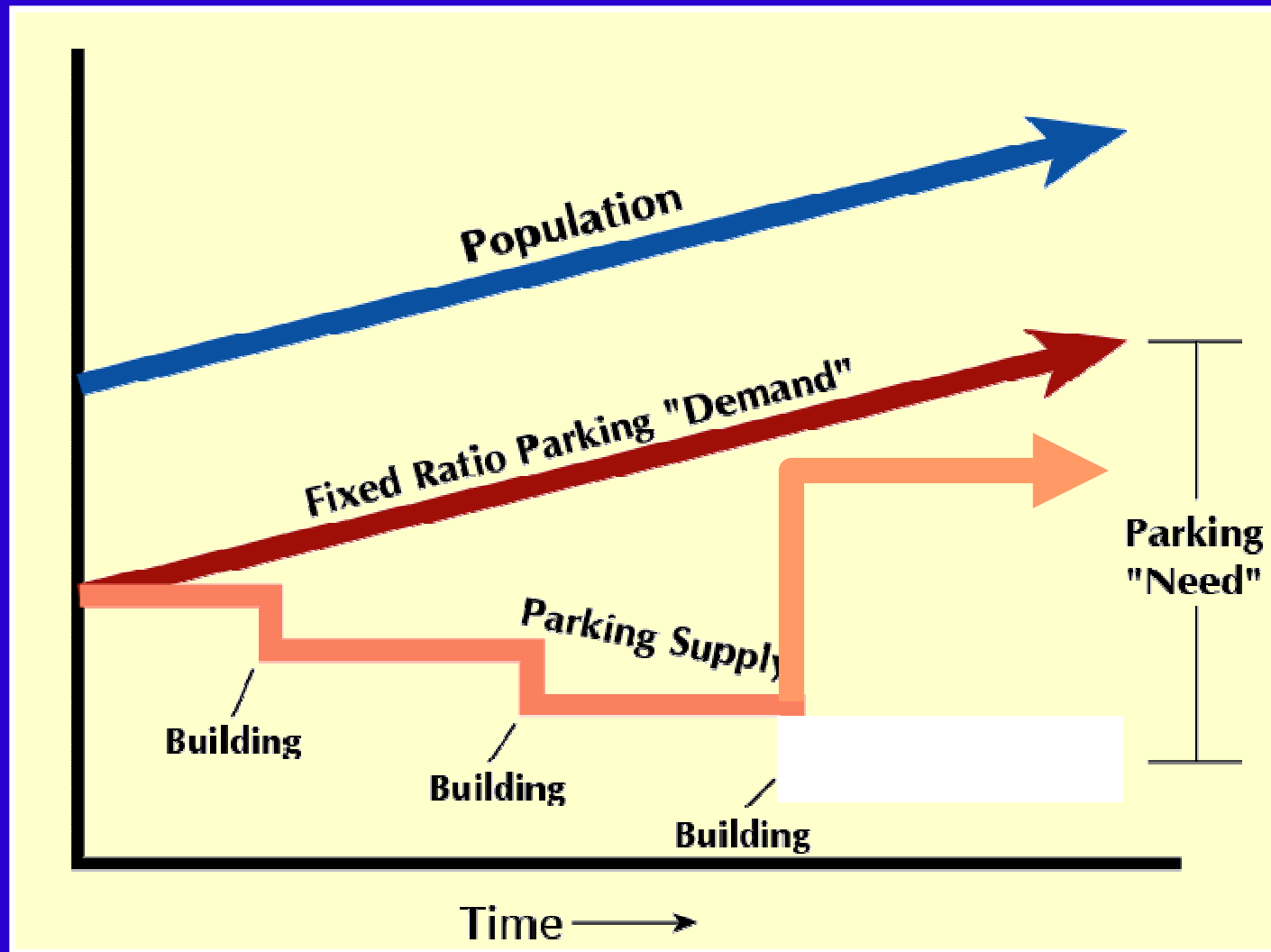








Problems with the “Status Quo” Scenario





What Does a Parking Space Cost?



Capital Cost Per Space Added

**Stanford University
Parking Garages (in 1995 \$):**

\$18,829 per space gained

Monthly Cost Per Parking Space

Assume:

- ❖ \$18,829 per space gained
 - ❖ 7.5% interest
 - ❖ 40 year lifespan
- (use PMT function in Excel)

Then:

- \$124 per space per month

Operating Costs

- ❖ Includes cleaning, lighting, maintenance, etc.
- ❖ UCLA: \$33 per space per month
- ❖ Stanford: \$32 per space per month

Total Monthly Cost Per Space

What monthly fee would be needed to break even?

Capital	\$124
Operating	\$32
<hr/>	
TOTAL	\$156

Net Monthly Cost Per Space to Stanford

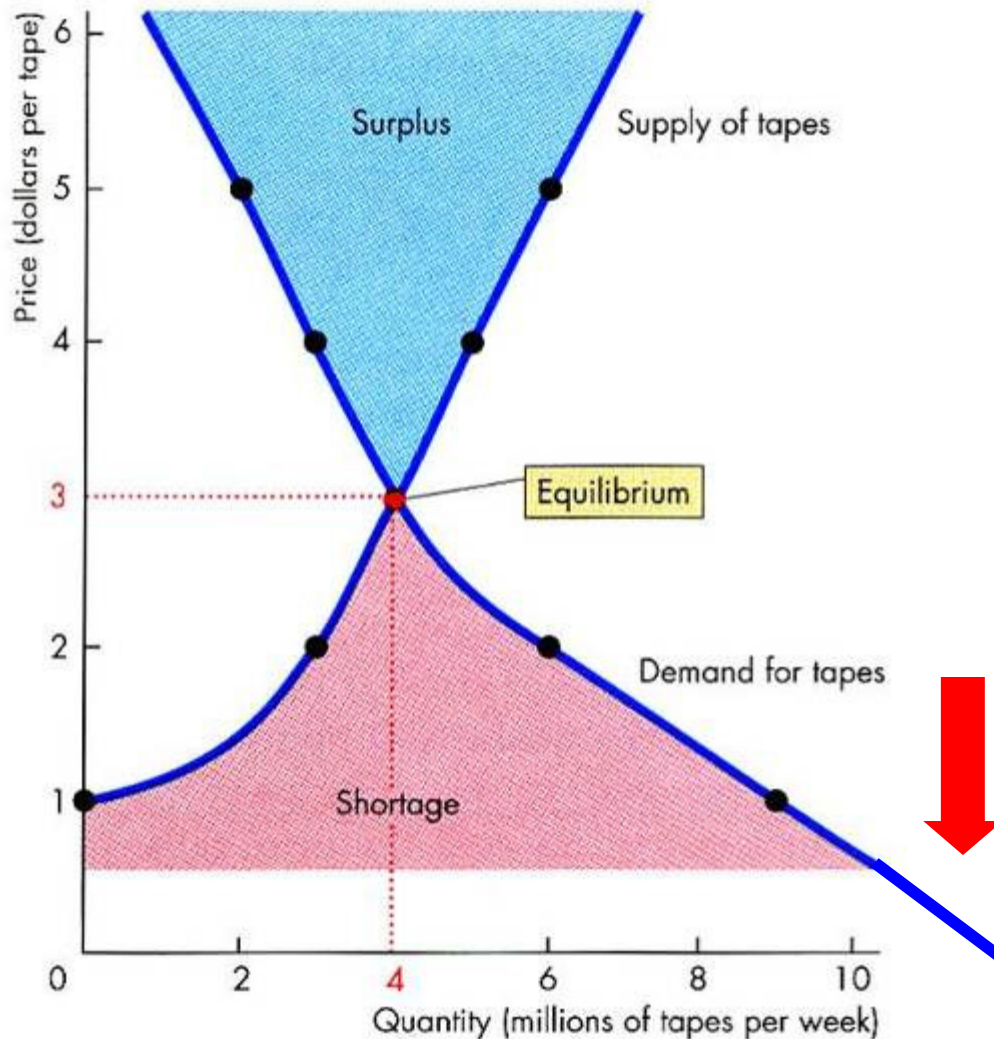
Parking cost	\$156
- <u>Parking price</u>	<u>\$8</u>
= Cost to Stanford	\$148

Idea 2

Parking is a commodity

Economists' Laws of Supply and Demand

Figure 4.7 Equilibrium



❖ **The Law of Demand:**
Other things being equal, the higher the price of a good, the lower the quantity demanded.

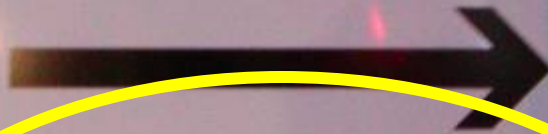
❖ **The Law of Supply:**
Other things being equal, the higher the price of a good, the greater the quantity supplied.

Source: *Economics*, Michael Parkin



Central
Parking System

EVENT & PUBLIC PARKING



\$1.75 PER 1/2 HOUR

\$6.00 MAXIMUM

ENTER AFTER 6:00PM

NO OVERNIGHT PARKING

How do parking prices affect demand?

Location	Scope of Study	Financial Incentive Per Month (in 1995 \$)	Decrease in Parking Demand
Century City District, West Los Angeles	3500 employees surveyed at 100+ firms	\$81	15%
Cornell University, Ithaca NY	9000 faculty & staff	\$34	26%
San Fernando Valley, Los Angeles	1 large employer (850 employees)	\$37	30%
Bellevue, WA	1 medium-size firm (430 employees)	\$54	39%
Costa Mesa, CA	State Farm Insurance employees	\$37	22%
<i>Average</i>		\$49	26%

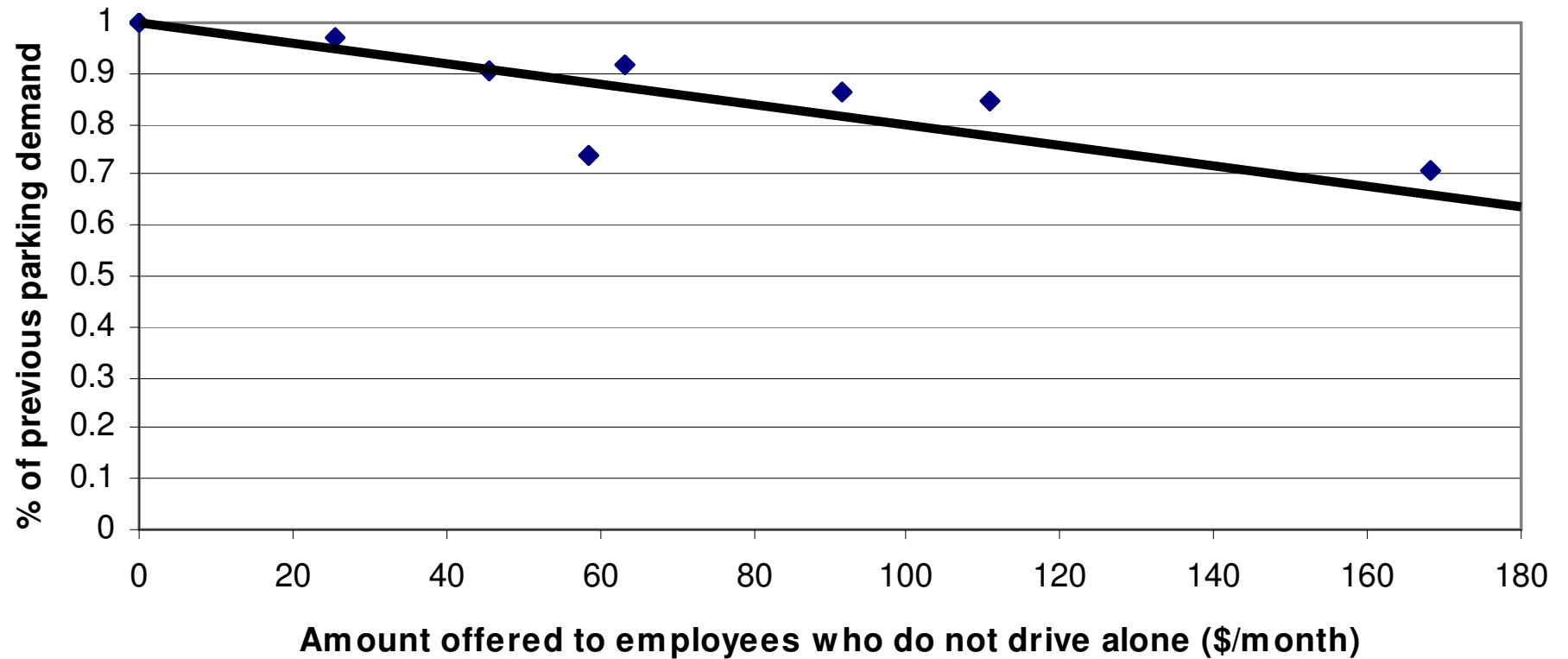
How do parking prices affect demand?

Location	Scope of Study	Financial Incentive Per Month (in 1995 \$)	Decrease in Parking Demand
Los Angeles Civic Center	10,000+ employees at several organizations	\$125	36%
Mid-Wilshire Blvd., Los Angeles	1 mid-size firm	\$89	38%
Washington DC Suburbs	5500 employees at 3 worksites	\$68	26%
Downtown Los Angeles	5000 employees surveyed at 118 firms	\$126	25%
<i>Average</i>		\$102	31%

How do parking prices affect demand?

Location	Scope of Study	Financial Incentive Per Month (in 1995 \$)	Decrease in Parking Demand
University of Washington, Seattle WA	50,000 faculty, staff & students	\$18	24%
Downtown Ottawa, Canada	3500+ government staff	\$72	18%
<i>Average</i>		<i>\$45</i>	<i>21%</i>

Parking Cash-Out: Results



Idea 3

Find ways to avoid the
cost of building parking

Common Downtown Problems:

- ❖ "Not enough parking"
- ❖ "No spaces available in front of my business"
- ❖ "Charging for parking will drive customers away"
- ❖ "We need a parking garage to spur economic development"





Recent downtown garage costs

Cost Per Space Added Recent Parking Garages

Boston, PO Sq. (1990):	\$34,000
Walnut Creek (1994):	\$32,400
Children's Hosp. (1996):	\$40,000
Palo Alto (2002):	\$50,994
MIT Stata (2004):	\$60,000
San Jose (2002):	\$77,000
Seattle (2005):	\$70,000
Fairfax VA (2004):	\$16,000
Colorado (2006):	\$15,000
Lowell (2007):	\$24,000



Monthly Cost Per Parking Space

Lowell Municipal Garage
900 spaces
\$21M

Assume:

- ❖ \$24,000 per space added
- ❖ 6.0% interest
- ❖ 40 year lifespan



Result:

- \$129 per space per month

Total Monthly Cost Per Space

What monthly fee would be needed to break even?

Capital	\$129
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Operating	\$33
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TOTAL	\$162
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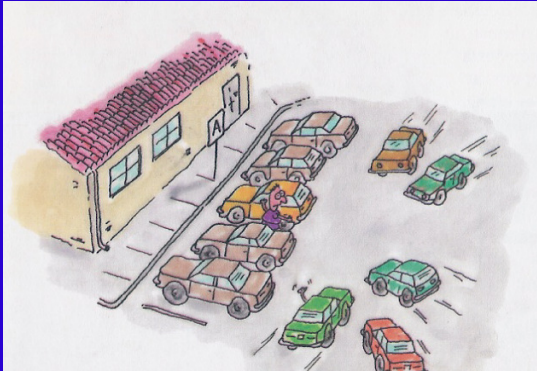
(\$7/space per day)

Idea 4

Put that land value to use

Stanford's Employee Transportation Benefit

Drive Alone: \$148



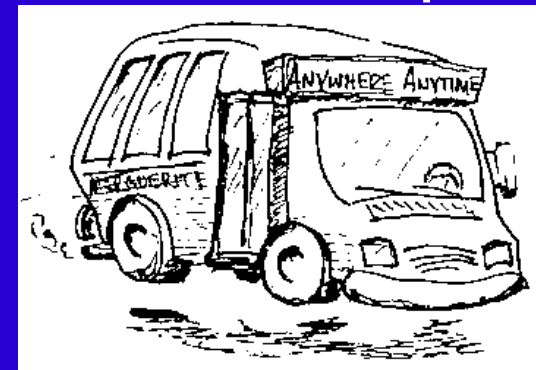
Carpool: \$0



Bike/Walk: \$0

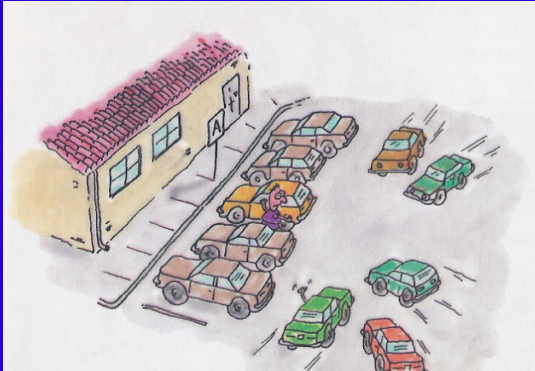


Transit: \$0



Employee Benefits After Cash-Out

Drive Alone: \$148



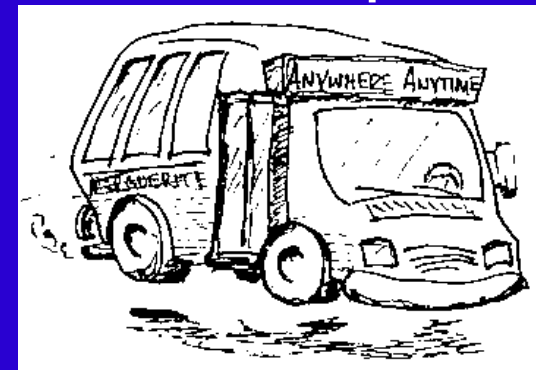
Carpool: \$148



Bike/Walk: \$148



Transit: \$148



Is Transit Really More Expensive to Operate?



- ❖ ~~New Parking Garage~~
\$7 per commuter per day
- ❖ Stanford's Free Shuttle
\$2 per commuter per day

**Determined it is cheaper to pay commuters
not to drive than to provide more parking**





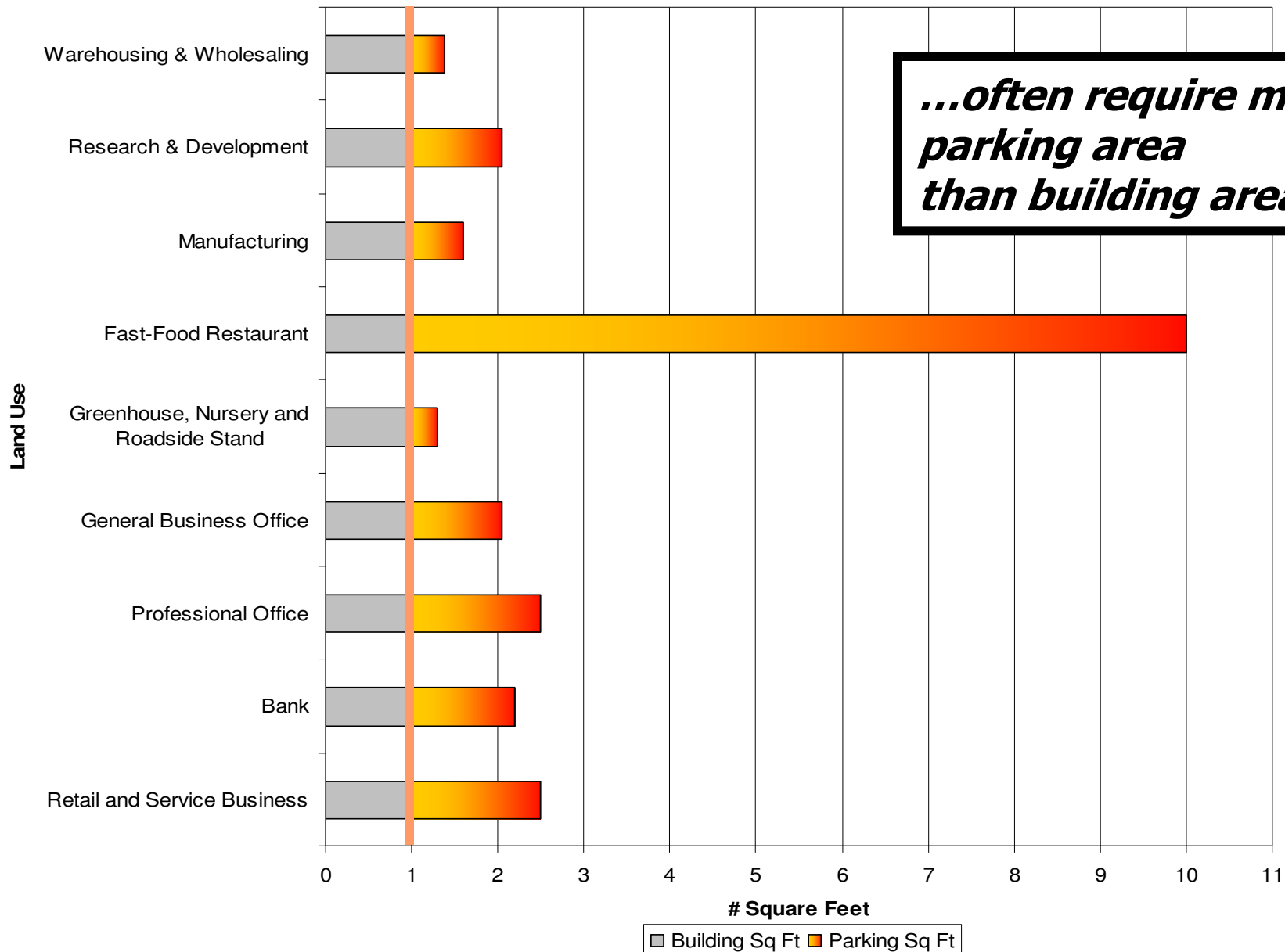
What Land Value Are We Losing?

Restaurant Table
5' x 5' = 25 ft²

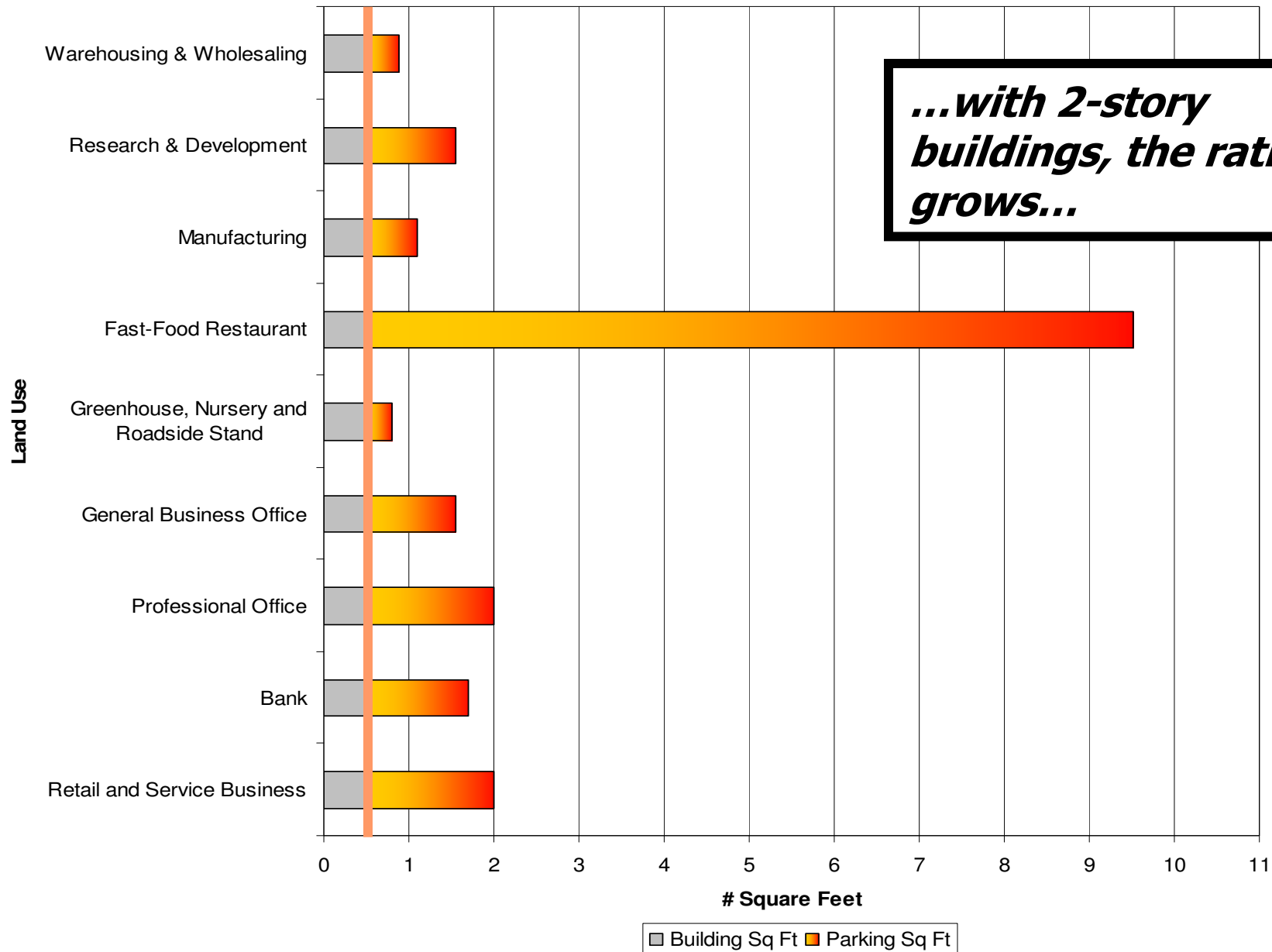
Office Cubicle
8' x 9' = 72 ft²

Parking Space
10' x 20' = 200 ft²

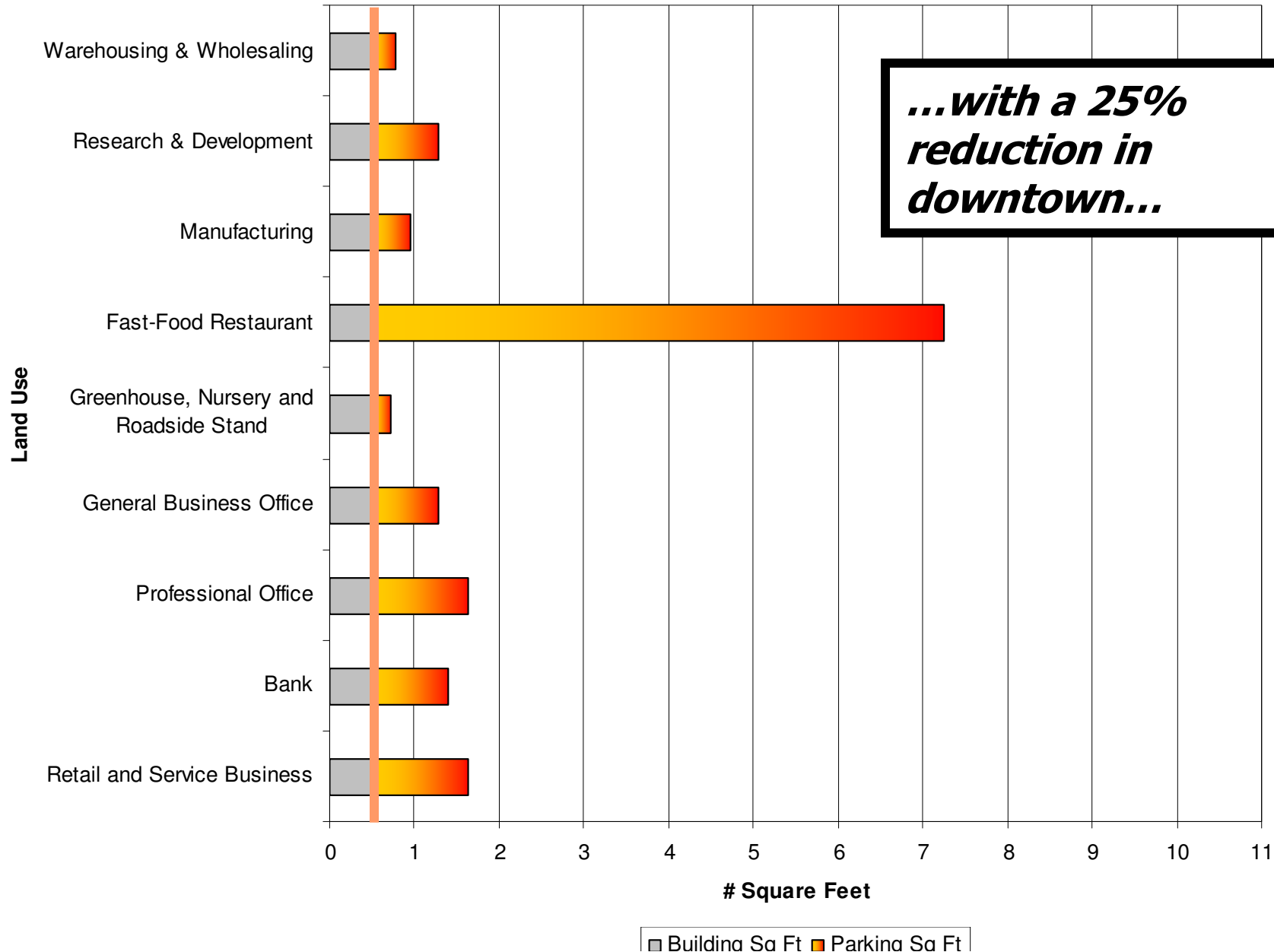
Current Parking Requirements: Hingham



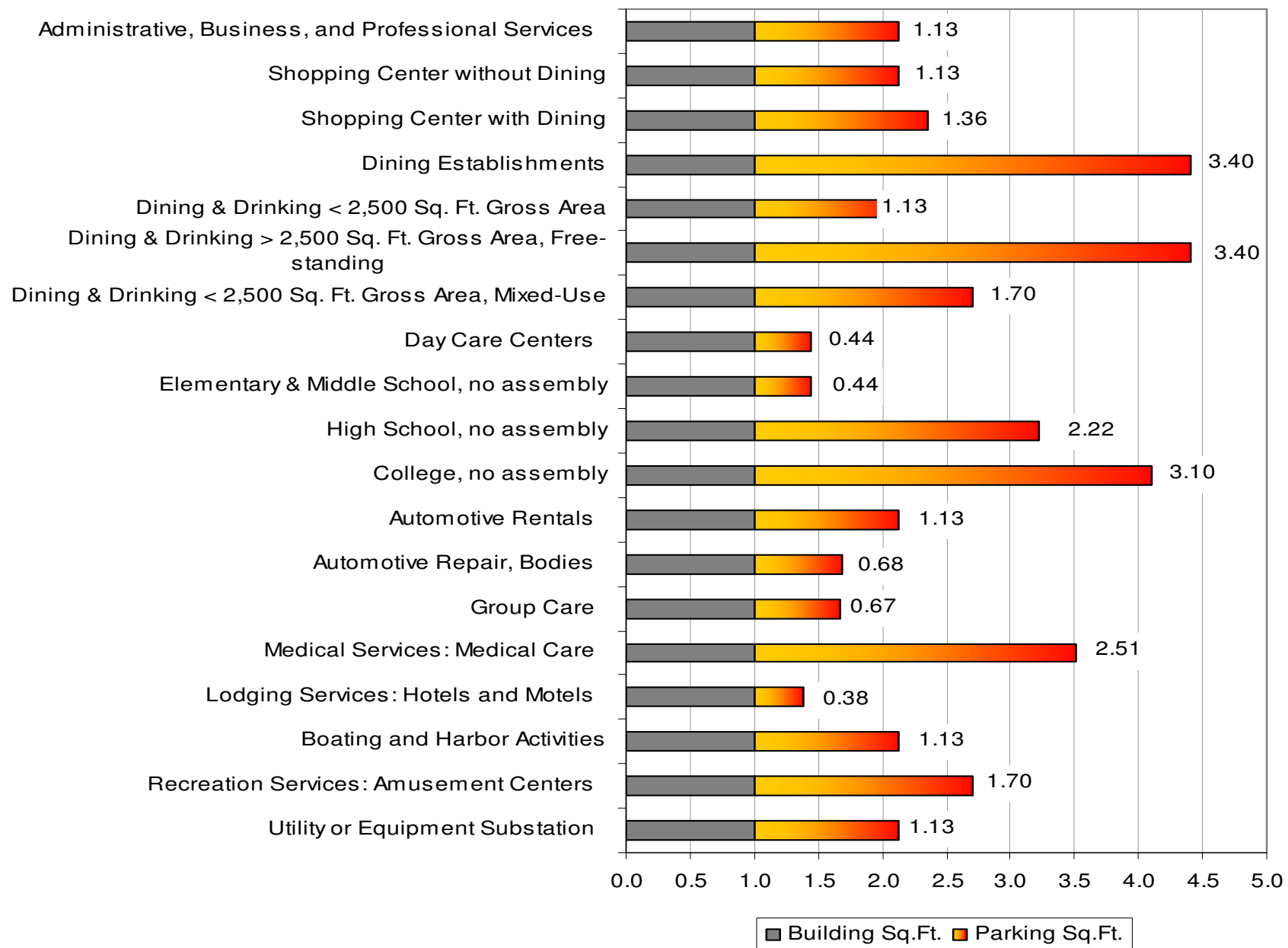
Current Parking Requirements: Hingham



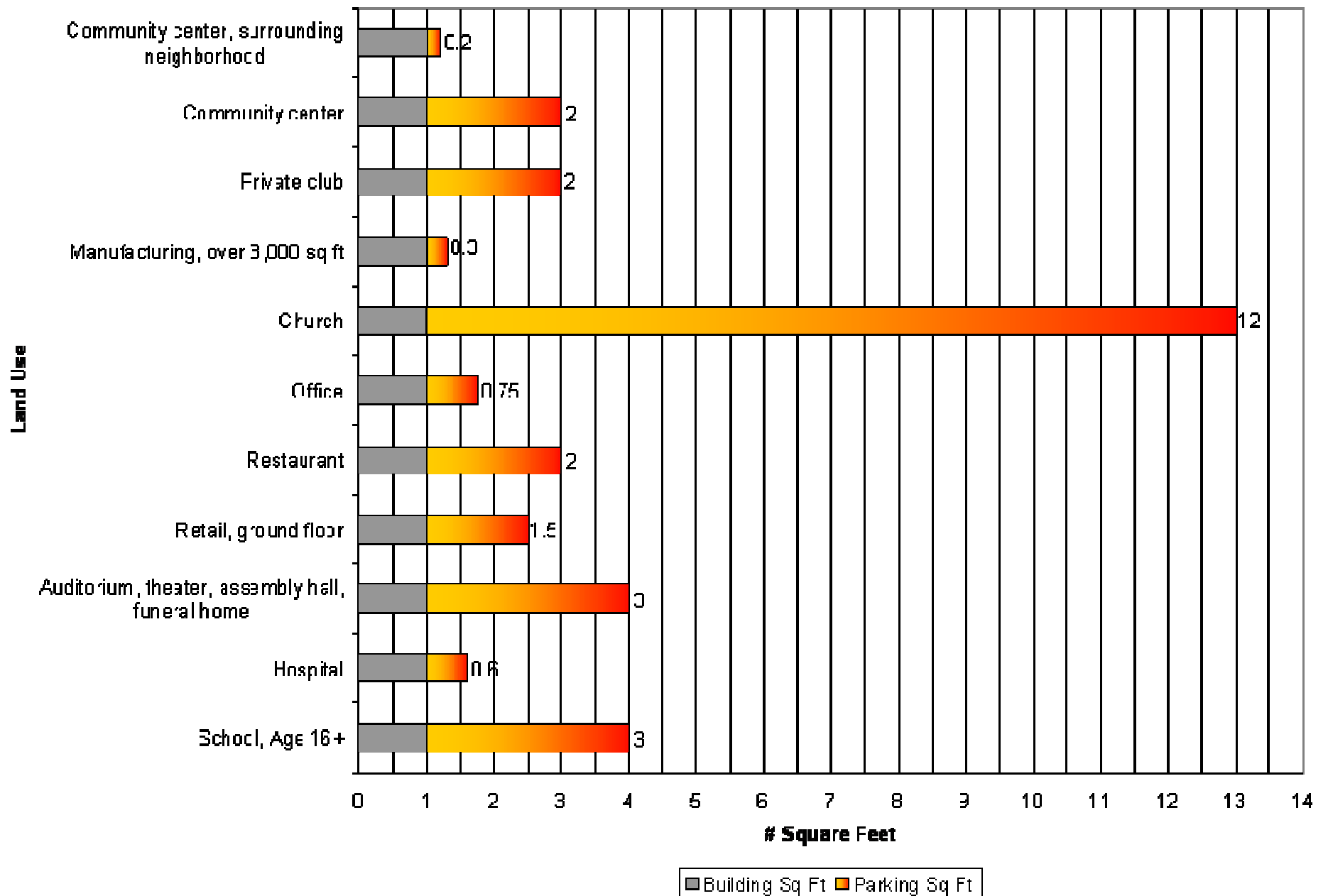
Current Parking Requirements: Hingham



Ventura CA



Portland, ME



Pasadena CA – Case Study

Putting on-street
value to use







**A NEW
OLD PASADENA
COMING SOON**

STREET AND ALLEY WAY IMPROVEMENTS:

LIGHTING

REPAVING

TRASH RECEPTACLES

SIGNS AND BENCHES

DIRECTORY MAPS

TREES AND GRATES

NEWSRACKS

MAINTENANCE

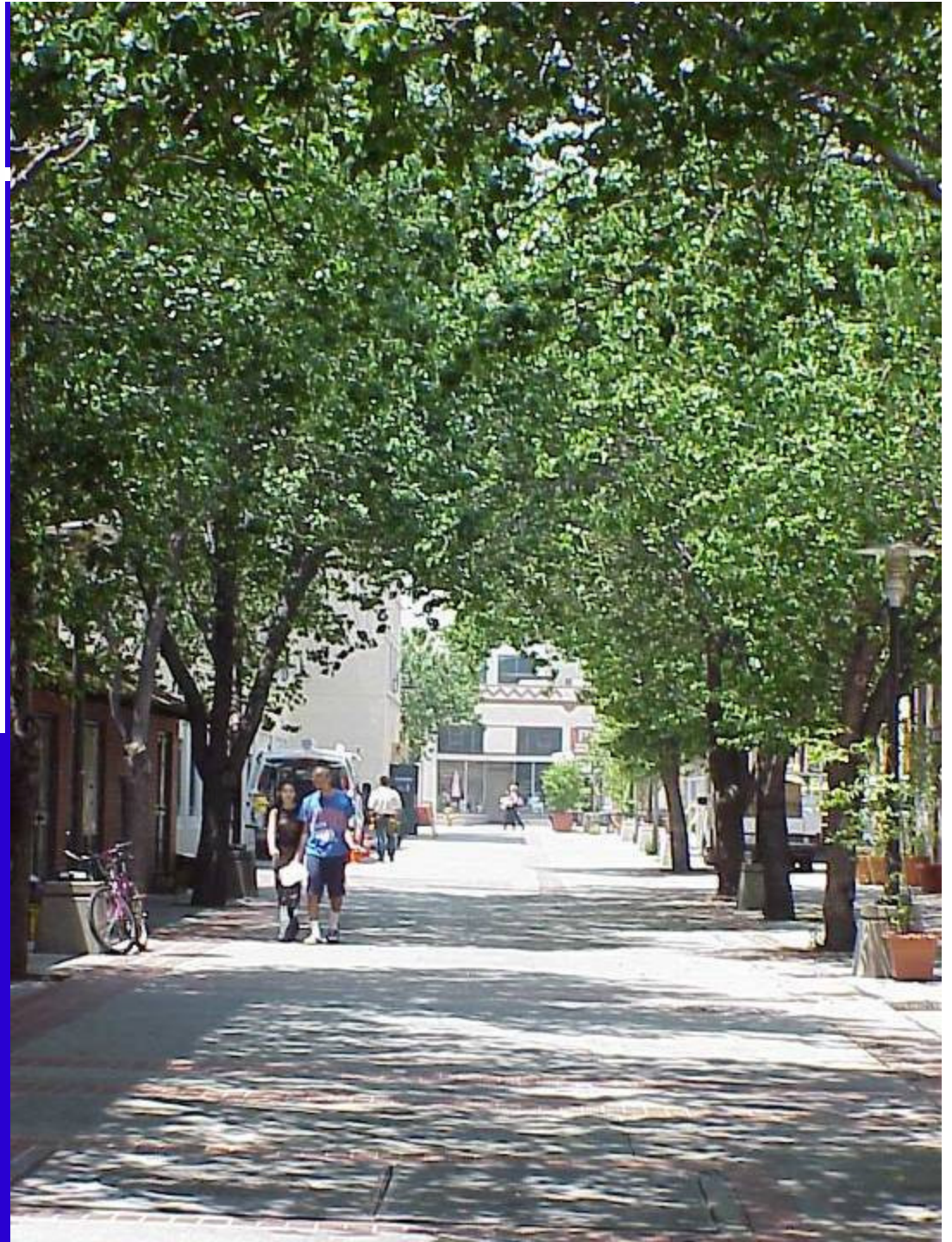
SAFETY

**YOUR METER MONEY IS
MAKING A DIFFERENCE**

THE OLD PASADENA RENAISSANCE CONTINUES

CITY OF PASADENA









Old Town Pasadena Parking Benefit District

- ❖ Meters installed in 1993: \$1/hour
- ❖ Revenue today: \$5.4 million annually
- ❖ Funds garages, street furniture, trees, lighting, marketing, mounted police, daily street sweeping & steam cleaning



Old Pasadena, 1992-99:
Sales Tax Revenues
Quadruple



Source: Above images from Digital Payment Technologies, 2005

Parking benefit districts

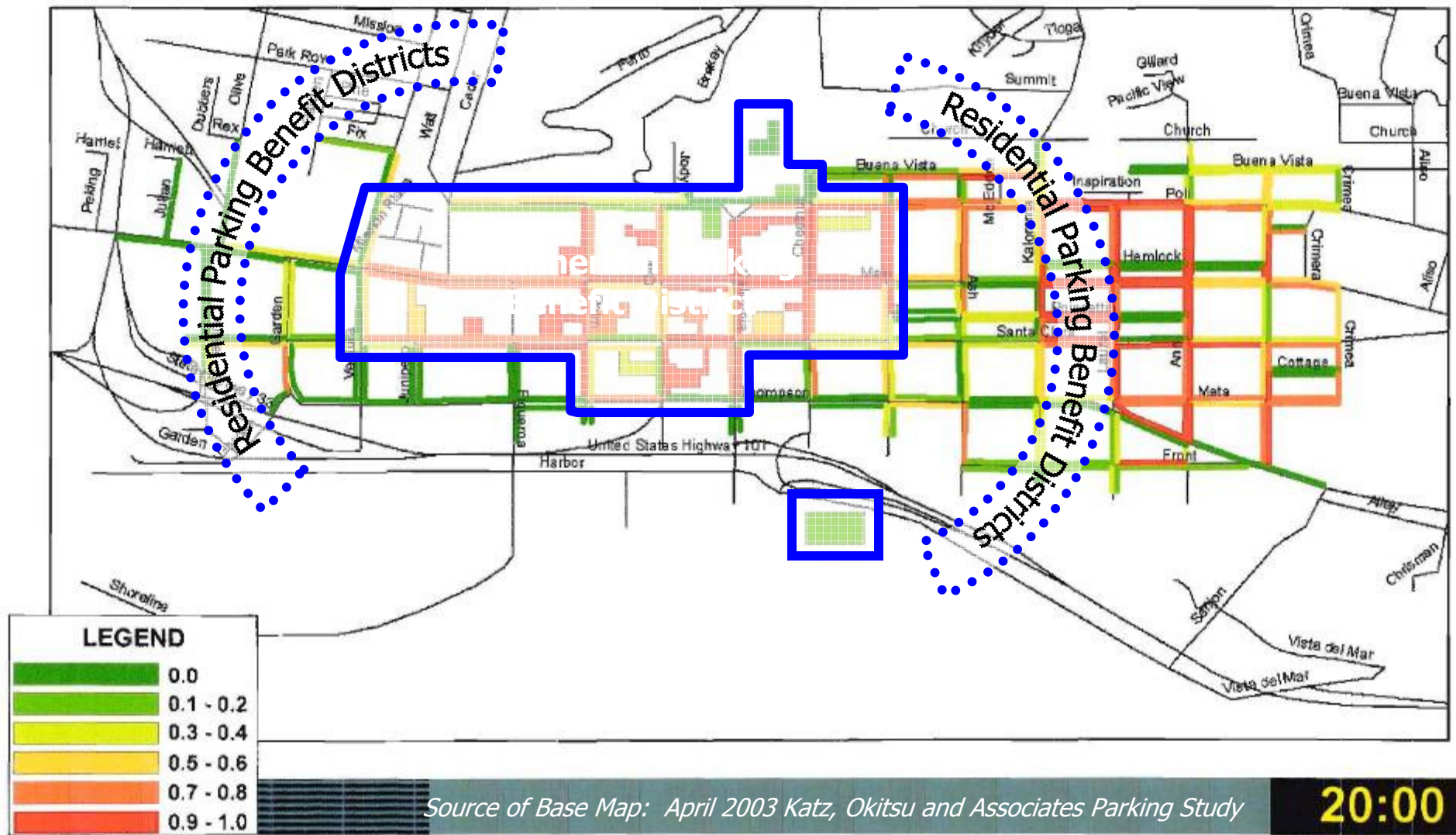
Commercial:

- ❖ Pasadena, CA
- ❖ San Diego, CA
- ❖ Redwood City, CA
- ❖ Seattle, WA
- ❖ Montgomery Co., MD
- ❖ *Washington, DC ???*

Commercial & Residential:

- ❖ Aspen, CO
- ❖ Boulder, CO
- ❖ Santa Cruz, CA
- ❖ Tucson, AZ
- ❖ West Hollywood, CA
- ❖ Austin, TX

Ventura Parking Benefit District Boundaries



Tools: Transportation Improvement District

- ❖ Example: Boulder, CO, Downtown Management Commission & Central Area General Improvement District (CAGID)
- ❖ Responsibilities:
 - Parking construction and management
 - Operates full menu of demand management strategies
- ❖ Cheaper to provide free transit to all downtown employees than provide them parking
- ❖ Provides buying power/negotiating strength for small businesses



“In the 1970s, downtown was dying ”

Boulder's Transportation Resource Center

- ❖ Store-front operation
- ❖ Responsibilities:
 - Provides transit/bike/ped info, personalized advice
 - Personalized ridematching services
 - Organizes regular marketing events (Bike-to-work Day, etc.)
 - Outreach to individual businesses
 - Rentals of bike lockers



Boulder's strategies

- ❖ No nonresidential parking requirements in CAGID area
- ❖ Public garages – 84% funded by parking fees, 16% by taxes
- ❖ Parking benefit district: \$1 million per year in meter revenue kept
- ❖ Employee benefits: free universal transit pass(Eco-Pass); Guaranteed Ride Home; ride-matching services; bicycle parking, etc.
- ❖ \$325,000/year TDM budget
- ❖ Carpooling: 35% in 1993 to 47% in 1997
- ❖ Eco-pass: reduces commuter parking demand by 850 spaces



Boulder's Neighborhood Permit Parking initiatives

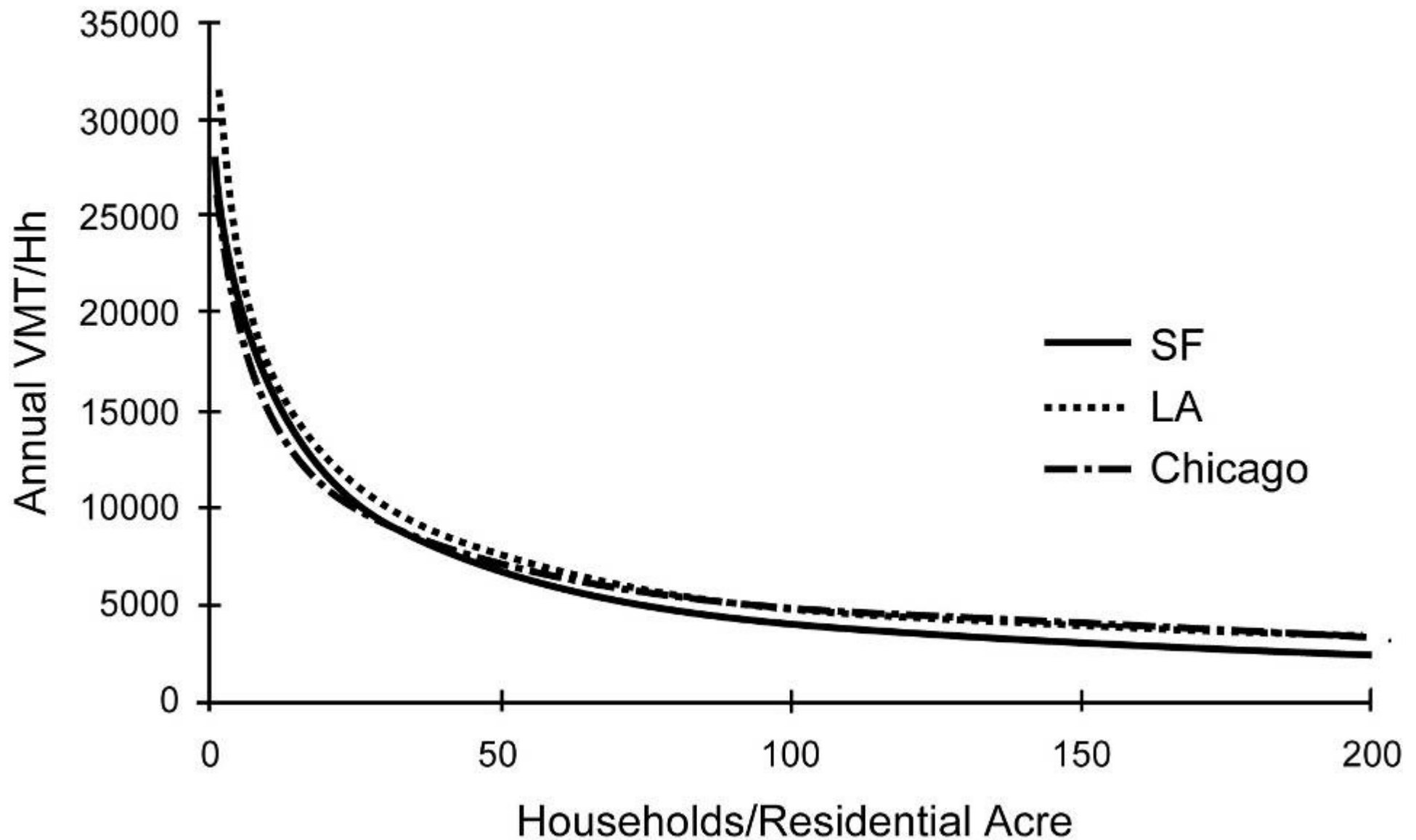
- ❖ Residential Permit Parking
- ❖ prevents overspill parking from commuters trying to avoid parking restrictions and charges downtown.
- ❖ Commuters can buy on-street parking permits for \$60 per quarter
- ❖ Commuter permits: up to four per block face, on blocks where average occupancy is lower than 75%.
- ❖ Designed to be revenue neutral
- ❖ Commuter fees cross-subsidize annual resident fees of \$12 per year



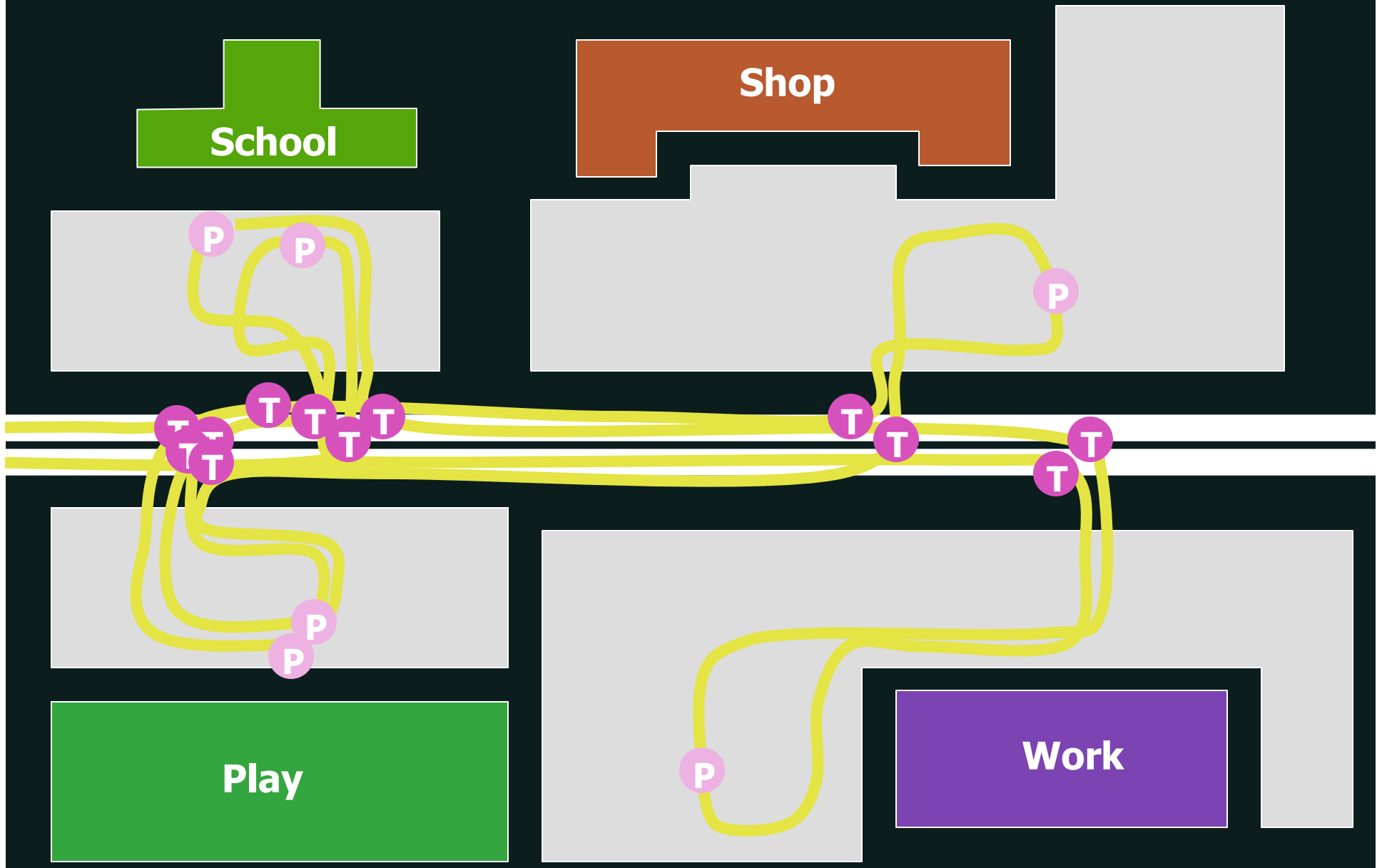
Idea 5

Develop a “Park Once” District

Driving vs Residential Density



Conventional Development



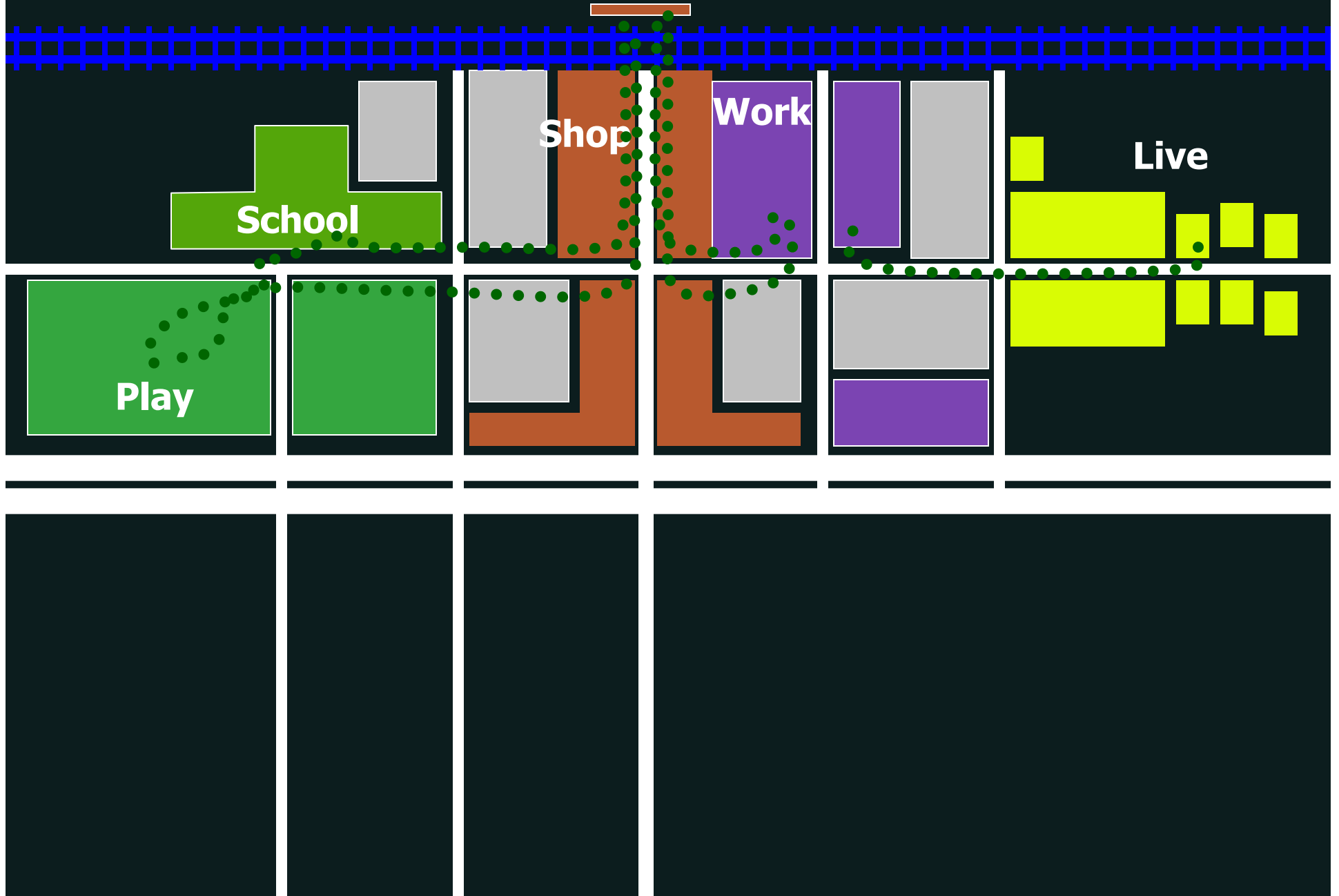
Mixed Use, Park Once District



Results:

- $< \frac{1}{2}$ the parking
- $< \frac{1}{2}$ the land area
- $\frac{1}{4}$ the arterial trips
- $\frac{1}{6}^{\text{th}}$ the arterial turning movements
- $< \frac{1}{4}$ the vehicle miles traveled

Transit Oriented Development





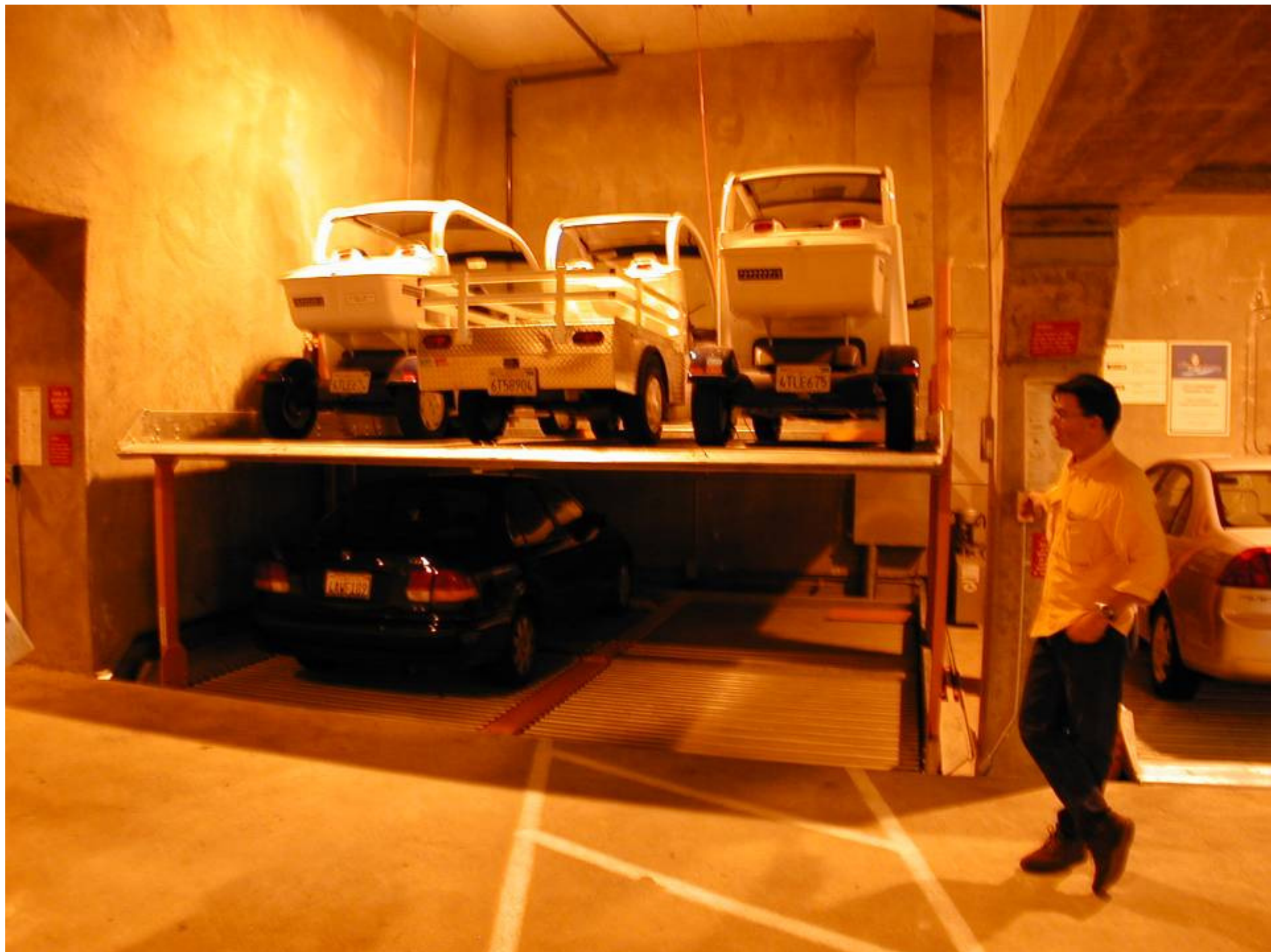
Parking costs are “unbundled”

Parking fee: \$150/month



The Freedom of
Driving *WITHOUT*
The Hassles of **Ownership**

















For More Information

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